

REMARKS

Reconsideration of the above-identified application in view of the following remarks is respectfully requested.

Claims 70-81 and 83-108 are currently pending, of which Claims 90-101 are Withdrawn.

Claims 70-89 (of which Claim 82 was previously canceled) and 102-107 are rejected under 35 U.S.C. 103(a).

Claim 70 has been amended to recite "A solar power system comprising: at least one device, each said device including a single solar radiation concentrator having an aperture of between about 0.5 m and about 2 meters, adapted for focusing incident solar radiation, said solar radiation concentrator configured to achieve at least 200 suns concentrating ratio; at least one power conversion unit which receives said light after being focused; and at least one solar tracking apparatus comprising at least one rotational drive." A similar amendment has been made to Claims 90 and 95. In view of these amendments to Claims 70, 90, and 95, minor amendments have been made to Claims 89, 102, and 104-108. It is submitted that no new matter has been added by these amendments, and that support therefor may be found in the application, for example, at page 8, line 28.

Additionally, the underlined phrase "solar radiation concentrator having an optical focal point" has been deleted from each of Claims 70, 90, and 95. It is submitted that support for this amendment may be found in the application, for example, at page 12, line 31, wherein it is stated that "Preferably, concentrator 12 is dish-like, having a focal point. Alternatively, other geometries...may be used."

Claim Rejections – 35 U.S.C. § 103

In the Office Action, Claims 70-89 and 102-107 were rejected under 35 U.S.C. 103(a) as being unpatentable over Strauss et al. (U.S. Patent No. 3,427,093) in view of Papadopoulos (WO 2004/088759). Applicant respectfully traverses this rejection.

Neither of the cited references teaches the limitations found in amended Claim 70, namely "at least one device, each said device including a single solar radiation concentrator having an aperture of between about 0.5 m and about 2 meters, adapted for focusing incident solar radiation, said solar radiation concentrator configured to achieve at least 200 suns concentrating ratio; at least one power conversion unit which

receives said light after being focused; and at least one solar tracking apparatus comprising at least one rotational drive."

Strauss et al. teach a light intensity modulator in a solar simulator unit (column 1, line 14), not a solar power system for focusing incident solar radiation, the system including a power conversion unit and a solar tracking apparatus, as recited in amended Claim 70.

First of all, contrary to the recitations of Claim 70, Strauss et al. do not teach a solar radiation concentrator. The Examiner has suggested that Strauss et al. show (Fig. 1) a concentrator in the form of mirrors. However, Strauss et al. state that the modulator is "located between the collector optics section and the collimating section at the focal point of the simulator" (column 2, line 69). Since mirrors are shown in both the collector section and the collimator section, and since Strauss et al. state that the focal point is in between these two sections, it is not possible for either set of mirrors to be a "concentrator," as recited in Claim 70. Indeed, Strauss et al. do not teach any component which acts or can act as a "solar radiation concentrator."

Second, Strauss et al. do not teach "focusing incident solar radiation." Instead, he clearly states that his device is for modulating and controlling the intensity of illumination in light beams emanating from light sources" (column 1, line 19).

Third, Strauss et al. do not teach a power conversion unit. Instead, his device is a modulator for modulating light beams emanating from light sources. Strauss et al. specifically state that the device "may be used with a variety of high intensity sources of thermal, visible, and ultraviolet radiation such as a carbon arc radiant energy source, high pressure xenon or mercury-xenon bulbs, plasma arcs, and other high intensity sources...It is also particularly adapted to smooth out radiation intensity fluctuations which are characteristic of radiation energy sources, particularly carbon rod burning." Power conversion of the light beams is neither shown nor suggested by Strauss et al.

Fourth, contrary to the Examiner's suggestion that Strauss et al. disclose at least one solar tracking apparatus (Office Action, page 2, paragraph 4), the device to Strauss et al. does not track the sun, nor is it able to track the sun and concentrate solar radiation. The Examiner has suggested that Strauss et al. teach (column 3, lines 20-35 and column 4, lines 45-column 5, line 27) "at least one solar tracking apparatus comprising at least one rotational drive." However, these portions of the reference to Strauss et al. do not discuss solar tracking. Instead, they discuss three other issues: (a)

variation of the intensity of a radiant beam by enlarging/reducing the circular opening between rotatable members, (b) rotation of cylinders to achieve a maximum or minimum size aperture through which light is modulated, and (c) examples of rotatable cylinders having two, three, or four rotatable members. The modulator has rotatable members which adjust the size of an aperture, thereby determining the intensity of light allowed to pass through the device, but, contrary to the suggestion of the Examiner, it does not track the sun.

Papadopoulos teaches a concentrating system including a pair of reflectors: a primary parabolic reflector and a second ellipsoidal reflector, each reflector having a smooth front surface and a rear surface consisting of corrected rectangular prisms (page 4, line 36; page 5, line 22). The primary reflector creates a wide beam of rays which is reflected backwards by the secondary reflector (page 5, line 28), which focuses solar radiation into solar arteries (page 4, line 14). The corrected curves of the prisms on both reflectors provide accurate focusing and high concentration of solar radiation.

Papadopoulos does not teach a "system comprising: at least one device, each said device including a single solar radiation concentrator." Instead, he teaches a device having a pair of reflectors which focus solar radiation into a narrow beam (page 2, line 38).

It is not clear why one would want to combine the modulator or Strauss et al. with the solar concentrator of Papadopoulos. However, even if one were so inclined, he would not arrive at the system having the limitations found in amended Claim 70, noted above, namely "at least one device, each said device including a single solar radiation concentrator having an aperture of between about 0.5 m and about 2 meters, adapted for focusing incident solar radiation, said solar radiation concentrator configured to achieve at least 200 suns concentrating ratio; at least one power conversion unit which receives said light after being focused; and at least one solar tracking apparatus comprising at least one rotational drive."

Applicant respectfully submits, therefore, that amended Claim 70 is patentable over Strauss et al. in view of Papadopoulos. It is further submitted that Claims 71-82 and 83-89 and 102-107 are allowable, as they depend from allowable amended independent Claim 70.

Prior to mailing of the Examiner's next Official Action, Applicant hereby requests an interview with Examiner Gravini, and the Examiner's Supervisor to discuss

the outstanding Official Action and Applicant's Amendment submitted herewith. The undersigned will contact the Examiner in the near future to determine a mutually convenient time to conduct the interview.

Respectfully submitted,

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Enclosure:

- Request for Continued Examination (RCE)